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Information on the activities of international intergovernmental and non-governmental organizations relating to space law

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Note by the Secretariat

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I. Introduction

1. The present document was prepared by the Secretariat on the basis of information received from the International Institute of Space Law and the International Law Association.

II. Replies received from international intergovernmental and non-governmental organizations

International Institute of Space Law

[Original: English]
[19 January 2016]

A. International Institute of Space Law

Founded in 1960, the International Institute of Space Law (IISL) is an independent non-governmental organization dedicated to fostering the development of space law. The membership of the Institute is composed of individuals and institutions from almost 50 countries elected on the basis of their contributions to the field of space law or other social sciences related to space activities. In addition, prospective membership is open to students and young professionals with a demonstrated interest in space law.

The purposes and objectives of IISL include the promotion of further development of space law and expansion of the rule of law in the exploration and use of outer space for peaceful purposes, the holding of meetings, colloquiums and competitions on juridical and social science aspects of space activities, the preparation or commissioning of studies and reports, the publication of books, proceedings, reports and position papers, and cooperation with appropriate international organizations and national institutions in the field of space law.

IISL holds an annual Colloquium at the International Astronautical Congress (IAC). During the Colloquium, the Nandasiri Jasentuliyana Keynote Lecture takes place, as well as a special session for young scholars. IISL strives to address topics that are of interest to all space actors and invites all IAC attendees to attend and participate in its sessions. IISL also co-organizes annual scientific-legal round tables with the International Academy of Astronautics (IAA), and joint sessions with the International Astronautical Federation.

In addition, the Institute organizes a variety of conferences on space law throughout the year in locations all over the world. It publishes the annual volume of IISL Proceedings with papers and reports of all activities during the year.

IISL is an officially recognized observer at sessions of the Committee on the Peaceful Uses of Outer Space and its Scientific and Technical and Legal Subcommittees.

The Board of Directors of IISL is currently composed of the following officers — President: Tanja L. Masson-Zwaan (Netherlands); Vice-Presidents:

K. R. Sridhara Murthi (India) and Kai-Uwe Schrogl (Germany); Executive Secretary: Diane Howard (United States of America); Treasurer: Dennis J. Burnett (United States; and members Setsuko Aoki (Japan), Olavo Bittencourt (Brazil), P. J. Blount (United States), Frans G. von der Dunk (Netherlands), Marco Ferrazzani (Italy), Steven Freeland (Australia), Joanne Irene Gabrynowicz (United States), Yasuaki Hashimoto (Japan), Stephan Hobe (Germany), Mahulena Hofmann (Czech Republic), Corinne Jorgenson (United States), Sergio Marchisio (Italy), Lesley-Jane Smith (United Kingdom of Great Britain and Northern Ireland), Milton "Skip" Smith (United States), Maureen Williams (United Kingdom/Argentina) and Zhenjun Zhang (China). The Institute has about 450 elected members from 50 countries. Membership categories include individual, prospective and institutional membership (see www.iislweb.org/members.html).

B. Manfred Lachs Space Law Moot Court Competition

Since 1992, IISL has organized the annual Manfred Lachs Space Law Moot Court Competition. The competition is based on a hypothetical space law case, written by IISL members, in which around 60 student teams from universities in Africa, Asia and the Pacific, Europe and North America participate. The competition is an important part of the organization's outreach programme and its principal mechanism for engaging future generations of space law experts. The regional champions compete in the world finals, which take place at the International Astronautical Congress and are judged each year by judges of the International Court of Justice. This unique feature makes the Manfred Lachs Moot Court one of the most prestigious moot court competitions in the world.

The 25th edition of the Competition will be held in 2016 in Guadalajara, Mexico. The "Case concerning space debris, commercial spaceflight services and liability (Banché v. Rastalia)" concerns issues of space debris, commercial spaceflight services and liability, and is published on the IISL website. Further details about the moot court can be also found in the IISL report on capacity-building in space law.

C. Conferences

IISL organized the following events in 2015:

On 26-28 February 2015, the IAA-IISL Conference on Climate Change and Disaster Management was held in Trivandrum, India. It was co-organized by IAA, IISL and the Kerala State Council for Science, Technology and Environment, and addressed the contribution of space activities to understanding and solving the problems of climate change and disaster management from technical/technological, policy and legal perspectives. It included two legal sessions addressing the legal aspects of climate change and disaster management.

On 13 April 2015, on the occasion of the fifty-fourth session of the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space, IISL and the European Centre for Space Law organized the annual symposium for delegates of the Legal Subcommittee. The symposium addressed "Space traffic management".

The 58th IISL Colloquium was held from 12 to 16 October 2015, in conjunction with the 65th International Astronautical Congress. IISL hosted five legal sessions, as well as two joint sessions with IAA and IAF respectively. Professor Joanne Gabrynowicz delivered the Nandasiri Jasentuliyana Keynote Lecture on Tuesday, 13 October, followed by the seventh Young Scholars Session. Further sessions analysed the subjects of the relationship of international humanitarian law and territorial sovereignty with the legal regulation of outer space, the portrayal of space (including space law) in the media and movies, the legal issues of space traffic management, and the recent developments in space law. The 30th IAA-IISL Scientific-Legal Roundtable addressed the topic "Universities as actors in space", and the joint session with IAF concentrated on the legal framework for collaborative space activities. Finally, IISL contributed to a plenary event on small satellites.

The 10th Annual Eilene Galloway Symposium on Critical Issues of Space Law was held at the Cosmos Club in Washington, D.C., United States, on 9 December 2015. The topic was "Through the looking-glass of time: what has been achieved and where it leads".

D. Publications

Eleven International Publishing publishes the annual IISL Proceedings. Proceedings can be purchased via www.elevenpub.com/law/reeksen/proceedings-of-the-international-institute-of-space-law. Members are entitled to a 40 per cent discount and should send an e-mail to sales@budh.nl to order. The content of the proceedings since 1992 is also available via a subscription (fully searchable by keywords, author's name, etc.) at www.elevenjournals.com/tijdschrift/iisl/. Access to the contributions is on the basis of a username and password. Volumes three years and older are available via Heinonline.

On 20 December 2015, the IISL Board of Directors issued and adopted by consensus a position paper on space resource mining (see www.iislweb.org/html/20151220_news.html).

E. Awards

The Institute gives several awards and certificates annually to those who have shown outstanding achievement in the field of space law. In the course of the 58th IISL Colloquium in Jerusalem, Israel, IISL conferred the Lifetime Achievement Award on Marcia S. Smith (United States), the Distinguished Service Award on Sergio Marchisio (Italy), the Award of Appreciation jointly on M. Stanford (United Kingdom) and B. Schmidt-Tedd (Germany), and the Certificate of Gratitude on the Japanese Aerospace Exploration Agency.

The Diederiks-Verschoor Award was conferred on Dimitri Linden (Belgium) for his paper "The impact of national space legislation on private space undertakings: a regulatory competition between States". The IISL Young Scholars Fund chaired by Steven Freeland (Australia) awarded prizes to the participants in the regional rounds of the Manfred Lachs Space Law Moot Court Competition.

F. Further information

Further information is available from the following internet resources:

- Website: www.iislweb.org
- Facebook: www.facebook.com/spacelaw
- Twitter: https://twitter.com/iisl_space

International Law Association

[Original: English]
[6 January 2016]

A. Background

The International Law Association (ILA)[1] was founded in Brussels in 1873. Its headquarters are currently in London, and its policy has, ever since, been one of openness and outreach. According to its constitution, the Association's objectives are the study, clarification and development of international law, both public and private, and the furtherance of international understanding and respect for international law. Since 1990, ILA has been a permanent observer of the Committee on the Peaceful Uses of Outer Space and its Legal Subcommittee, to which it reports annually.

The powers of the Association are vested in the Executive Council in the intervals between the biennial conferences, the latest of which was held in Washington, D.C., in 2014 (Seventy-sixth ILA Conference). Regional meetings are organized with some frequency by the ILA national branches in different parts of the world between the biennial conferences. The Executive Chair of the Association is Lord Mance, Justice of the Supreme Court of the United Kingdom of Great Britain and Northern Ireland. Professor Marcel Bruce (Netherlands) is the Director of Studies, and Professor Ruth Wedgwood (United States of America) is the current World President. The Seventy-seventh Biennial Conference will be held in Johannesburg, South Africa, on 7-11 August 2016.

In this framework, the ILA Space Law Committee[2] has been working without interruption since its establishment in 1958. Over the years, it has elaborated reports, guidelines, draft conventions, proposals and the like on the legal and related aspects of outer space activities in the changing landscapes. This production may be found, both online and in book format, in the reports of the biennial conferences under the chapter "Space law". The officers of the Space Law Committee are Professor Stephan Hobe (German branch) as General Rapporteur and Professor Maureen Williams (ILA headquarters) as the Committee Chair. Both these officers sit on the ILA Executive Council as well.

[1] Report by the Chair of the Space Law Committee of the International Law Association. For further details see the ILA website (www.ila-hq.org); access by clicking on the links "committees" and then on "space law".

[2] Sometimes referred to in this report as "the ILA Committee" or, for short, "the Committee".

The Committee pays special attention to the developments of other branches of international law, particularly those most influenced by technological development, on the understanding that an interdisciplinary approach is essential as a sign of the times. A continuing review of "classical" international law and its principles to single out similarities and differences with the ongoing developments of space law is a regular feature among the distinguished specialists who have joined the Committee over the years. Indeed, international law and its general principles are at the very root of our discussions and suggestions, which in turn lead to specific proposals. To this end, part of the work is carried out in cooperation with other ILA international committees addressing, inter alia, international law and sea level rise, legal principles relating to climate change, nuclear weapons and international law, non-State actors, international commercial arbitration and so forth.

In pursuance of its objectives, the ILA Space Law Committee works in cooperation with institutions involved in the contemporary aspects of international law and space law, inter alia, the International Law Commission, the Permanent Court of Arbitration (PCA), the International Civil Aviation Organization and, naturally, the Committee on the Peaceful Uses of Outer Space and its Subcommittees. The Committee and some of its members liaise permanently with national space agencies, universities and other research centres all over the world. At the private level, it participates regularly in the activities of international and regional organizations, in particular with the International Institute of Space Law (IISL), where some ILA Committee members form part of the Board. In this capacity, their latest task was to participate in the drafting of the IISL position paper on space resource mining, adopted by consensus by the Board of Directors on 20 December 2015 and to which the IISL President will no doubt refer during the current session of the Legal Subcommittee.

B. The ILA Space Law Committee in 2015

During the past year, the ILA Committee centred its work on the presentation for the Seventy-seventh Conference to be held next August in Johannesburg, following its terms of reference and carrying them further. The current mandate of the Executive Council to this Committee had noted that the Space Law Committee had an established relationship with the United Nations institutions on space law, including permanent observer status. In addition to its ongoing work with these bodies, the mandate indicates that it will work on dispute settlement relating to outer space activities and the 2011 Permanent Court of Arbitration Optional Rules for Arbitration of Disputes Relating to Outer Space Activities; suborbital flights and their legal implications (a new modality of modern space technology increasingly used by industrialized and developing countries); the use of satellite data in international litigation and new applications and the legal aspects of space debris having in mind its possible removal, and further developments in space law that may occur during the four-year mandate.[3] With respect to this final point, the Committee has become deeply involved in the analysis of space security and cybersecurity, as explained below.

[3] Report of the Space Law Committee to the Seventy-sixth Conference of the International Law Association, p. 296.

C. Recent activities of the ILA Space Law Committee and its members

In the last ILA report to the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space in April 2015 (A/AC.105/C.2/106, pp. 10-17) preliminary conclusions were announced on the central topics listed in section B, above. They were drafted pursuant to the 2014 Washington Conference[4] and, to date, continue under revision.

1. Dispute settlement

In the field of dispute settlement, the focal point is still the Permanent Court of Arbitration Optional Rules for Arbitration of Disputes Relating to Outer Space Activities.[5] The Committee is now involved in creating awareness of these Rules in the various circles and exploring their effectiveness. To date, the general view of the Committee is that the Rules should not be modified. Rather, they should remain in their present form without becoming any stricter yet. Their procedural nature and flexibility are still their most attractive features, together with the wide space left to the autonomy of the parties. Moreover, the PCA Rules have enriched the existing procedures in the field of dispute settlement relating to outer space activities by envisaging the possibility of both sovereign States and private parties using its mechanisms, thus filling a serious gap in the field left by the United Nations space treaties. ILA notes with satisfaction that the Chair and the General Rapporteur of its Space Law Committee, and a number of its members, have been appointed by PCA to its panel of specialized arbitrators on dispute settlement relating to outer space activities.

2. Suborbital flight

The topic of suborbital flight was added to the ILA Committee's agenda for discussion at the 2014 Washington Conference, and since then ILA has been contributing its views (see, inter alia, the note by the Secretariat on questions on suborbital flights for scientific missions and/or for human transportation (A/AC.105/1039/Add.3)). The positions of the International Law Association stated therein remain unaltered so far, and this issue is being further addressed at the invitation of the Legal Subcommittee's Working Group on the Definition and Delimitation of Outer Space (see A/AC.105/1090, annex II, para. 17).

The matter, to be included in part 2 of the Washington report, was entrusted to the Committee's Rapporteur, Stephan Hobe, in consultation with the Committee members and the Committee Chair. At that time, a number of outstanding issues were identified and depicted in the 2015 ILA report to the Legal Subcommittee (A/AC.105/C.2/106, pp. 12-13). A second Conference report is expected in August 2016, for submission to the ILA Johannesburg Conference, where a decision shall be taken on the convenience of drafting guidelines, a model law or some other non-binding instrument to rule the matter. Overall, the Committee concurs that a clearer legal framework is needed given the undefined nature of suborbital flight

[4] Hereinafter referred to as "the Washington Conference".

[5] Sometimes referred to as "the PCA Outer Space Rules" and/or "the PCA Rules".

technology. This, at the same time, would encourage the development of the private suborbital industry.

Many a proposal is being made to define or describe a suborbital flight. In doing so, the issues of delimitation and demarcation of outer space will be probably brought back to the fore.[6]

3. The use of satellite data in the light of recent developments

The use of satellite data in the light of recent developments has been, at different times, an area of particular interest to the Space Law Committee. The value of geospatial data as evidence in international litigation, in particular in international boundary disputes, is among its most recent contributions. This was an area of high sensitivity, and the judges, arbitrators, technicians, the doctrines held and so forth had opposing views concerning the validity of satellite imagery in court at the stage of evidence.

For further details, the ILA Committee refers to previous biennial conferences, in particular the Sofia report (Seventy-fifth Conference, 2012) and the Washington report (Seventy-sixth Conference, 2014). Among other sources, reference is made to the ILA annual reports to the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space in the past five years and to the United Nations regional workshops addressing this subject, inter alia, organized by the United Nations/Brazil (2004), the United Nations/Islamic Republic of Iran (2009), the United Nations/Argentina (2012) and the United Nations/China (2014), all available on the websites of the Office of Outer Space Affairs and ILA. At this point, however, it suffices to say that the aura of suspicion and disbelief surrounding the validity of geospatial data in court has subsided, and satellite evidence in international litigation is being used with increasing frequency. Moreover, general awareness of the possibilities and limitations of these technologies has grown considerably in today's world.

That said, in the period 2014-2015, ILA moved on to other new developments and applications of Earth observation satellites in line with technological advances. Special emphasis was given to (a) the protection of privacy, under threat by emerging technologies; (b) sea level rise and the applications of space technology in the field; and (c) space security and cybersecurity. These areas will be summarized in turn, and, finally, a word will be added on space debris in the current contexts.

(a) Protection of privacy

The ILA Committee is currently exploring ways and means of establishing an acceptable equilibrium between the principle of freedom of information and the protection of the right of privacy given the scope of far-reaching technologies such as Google Earth and "cyberespionage". The Committee perceived, as described in its last report to the Legal Subcommittee in 2015 (A/AC.105/C.2/106, p. 14), a current of thought whereby the principle of freedom of information was sometimes overridden by the need to protect privacy, especially in court decisions in the United

[6] Report of the ILA Seventy-sixth Conference Washington, 2014, pp. 301-304, on "Legal aspects of suborbital flight" and pp. 311-319. See also the Washington working session report, pp. 320-329.

Kingdom (as noted in *The Times* of London editorial of 21 April 2011). Briefly, what we are now discussing is whether the classic paradigms should be changed.

(b) Sea level rise

The ILA Committee is engaged in a consultation exercise with the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER) and the ILA Committee on International Law and Sea Level Rise. This is a new aspect of the law of the sea highly dependent on Earth observation satellites. It has undoubted interdisciplinary characteristics and a strong impact on other areas of international law such as statehood and nationality issues, human rights, State territory and floods affecting the international boundaries causing, among other things, migration problems. All in all, the ILA Space Law Committee finds that formulating proposals on the basis of space technology to meet the possible consequences and magnitude of this new threat is a realistic and viable objective.

(c) Security in space and cybersecurity

In recent times security questions have been topping the ILA and Space Law Committee agendas and prompting, in turn, intensive discussion. Having in mind that the ILA mandate to its Space Law Committee encourages addressing any further developments in space law that may occur during the four-year mandate,[7] what follows are some of the reasons for highlighting this topic in the Space Law Committee's 2016 report to the Legal Subcommittee.

Not so long ago, the general consensus that space debris, an arms race in space and natural near-Earth objects likely to impact on planet Earth were the major threats to space security. This was a recurring note at the United Nations Institute for Disarmament Research conference on "Security in space: the next generation", held in Geneva on 31 March and 1 April 2008. However so, in the current scenarios the threat of a cyberattack should enter this list.

The importance of looking into security matters lies in the fact that we are living in a very unsafe world where certain situations are calling for sound solutions. In this particular case, the threat of a cybernetic attack of untold dimensions looms on the horizon. Communications networks and Earth observation satellites, among other things, become attractive targets for a terrorist attack by means of cybertechnology. The ILA report to the Legal Subcommittee at its 2015 session (A/AC.105/C.2/106, section C.3 (b) of the reply submitted by the International Law Association) drew attention to the issue of space crisis management as discussed at a seminar at the Royal Institute of International Affairs (Chatham House, London) on 22 July 2014. A second meeting, entitled "Space security and cybersecurity", followed on 16 and 17 July 2015.

On both occasions, participants discussed the international perspectives resulting from the intersection of cybersecurity and space security. The standpoints and national legislations of China, France, India, Italy, Japan, Russian Federation, the United Kingdom and the United States were profoundly analysed and compared.

[7] Report of the Space Law Committee to the Seventy-sixth Conference of the International Law Association, p. 296.

Concern was expressed that modern technologies were gradually becoming more accessible to the civilian sector and represented a high level of threat if used as an element of terror. The central topic was an analysis of security challenges common to both the cybernetic and space domains noting, inter alia, an absence of national policy documents in the cybernetic and space spheres and a lack of agreed definitions of key terminology in both domains.[8] Furthermore, a "blurring" line was observed between "offensive" and "defensive" actions in the cyber and space fields and certain confusion between non-military and military roles in the cybernetic and space sectors. Moreover, unfortunate asymmetric threats in both these sectors were perceived, such as the idea that "offence is easier and cheaper than defence".[9]

There are other elements as well singled out by the Chatham House seminar. Whereas the space sector has a most defined infrastructure in Vienna, at the Office for Outer Space Affairs, the cybernetic sector is in a rather stormy infancy, with no clearly defined facilities of the kind. This situation seems to hinder the development of cybernetic policies, especially at security level. The view was expressed that in today's space environment many of the key issues cut across the civil-military spectrum, thus interfering with the effectiveness of future space policies.

The prevailing opinion at the moment is that the United Nations are the natural forum for the development of global cybernetic policies. It would be desirable for policies on space security and cybersecurity to be designed in the United Nations given the high dependency of latest generation technologies, such as robots, in technological areas.

Another threat to environmental security continues to be the loophole left by the 1967 Outer Space Treaty, whose article IV— to follow Bin Cheng's wording — does not go beyond a limited denuclearization of outer space and a non-militarization of celestial bodies.[10] This drafting was a matter of concern to space security over the years and is certainly inconsistent with the contemporary settings.

To go deeper into doctrinal positions on these matters would be going beyond the scope of this report. We shall simply point out that, in addition to the Chatham House research papers, the recent *Research Handbook on International Law and Cyberspace* (eds. N. Tsagourias and R. Buchan), published by Edward Elgar Publishing in 2015, provides a useful tool for shedding light on many a controversial issue mentioned above.

These are, in general lines, some outstanding problems in an initial approach to a field which the ILA Space Law Committee wishes to introduce to the Legal Subcommittee on the eve of its forthcoming Seventy-seventh Conference, where further developments are expected.

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[8] Caroline Baylon, "Challenges at the intersection of cyber security and space security: country and international institution perspectives", Chatham House research paper, published in December 2014.

[9] Ibid., summary, pp. 2-3. See also that research paper's chapter on the United Nations structure, by Ben Baseley-Walker.

[10] See "Le Traité de 1967 sur l'espace", *Journal du droit international*, No. 3 (1968), pp. 598-599.

4. Space debris, mitigation and removal issues

The area of space debris, mitigation and removal issues has been under permanent review by the Committee since the adoption, at the Sixty-sixth Biennial Conference (Buenos Aires, 1994), of the International Instrument on the Protection of the Environment from Damage Caused by Space Debris. In line with the views provided by the scientists, its clauses continue to be consistent with the present landscapes.

Not only is mitigation being considered further by the ILA Committee; so are the removal possibilities. The Washington working session recommended a thorough analysis of the legal implications of space debris removal which, as currently envisaged, would combine debris removal with satellite servicing operations. The Committee continues to recommend closer cooperation between the Legal Subcommittee and the Scientific and Technical Subcommittee and that, given its importance, the report of the Scientific and Technical Subcommittee's Working Group on the Long-term Sustainability of Outer Space Activities should also incorporate a legal perspective.

The next stage in the Space Law Committee's task will be its working session at the ILA Seventy-seventh Conference to be held in Johannesburg next August.